

# Children's gendered ways of talking about learning to write

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**Abstract:** This study attempts to integrate a gender perspective in the research of children's conceptions about learning to write. We analyzed the individual interviews of 160 schoolchildren – equally distributed between boys and girls – in the eight grades from kindergarten to seventh grade in elementary school in Argentina, in order to explore gender-related patterns in their conceptions of learning to write. The lexicometric method was applied to the transcriptions of children's responses. Subsequent qualitative analysis of modal responses revealed distinctive gender differences regarding both the content and the form of responses. We describe and interpret such differences within a theoretical framework that distinguishes two different modes of discourse and thought: the gendered conversational styles studied by Tannen, and the two modes of cognitive functioning proposed by Bruner. Results show that boys tended to adopt a report talk style and to present traits that are close to those proposed by Bruner in his portrait of the logico-paradigmatic mode of thought. Girls, instead, tended to adopt a rapport talk style and to integrate to a greater extent a set of procedures characterizing a narrative modality, by speaking at length of human actions, intentions and feelings. These findings underscore the educational potential of considering gender as an important (and still unexplored) aspect that influences children's (and most probably teachers') conceptions of how one learns.

**Keywords:** writing, children, gender, conceptions, lexicometry.



Scheuer, N., de la Cruz, M., Pedrazzini, A., Iparraguirre, M. S., & Pozo, J. I. (2011) Children's gendered ways of talking about learning to write. *Journal of Writing Research*, 3(3), 181-216. <http://dx.doi.org/10.17239/jowr-2012.03.03.3>

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## 1. Introduction

In this paper we study how girls and boys attending basic education in Argentina conceive the learning of writing. We examine whether there are relevant gender differences in children's conceptions of learning in this field; describe patterns of gender differences in children's responses to an in-depth interview, indicating distinct discursive and thought modalities; and, finally, reflect on possible implications for education.

In the past 20 years, increasing attention has been placed on the ways whereby gender might operate in primary school children's use and production of writing. Several studies point to a pattern of differences regarding the extension, modality, topic choice and meaning construction in the writings that girls and boys produce at school. For instance, according to a study of written productions by eight- to ten-year-old school children in Australia (Kanaris, 1999), girls tended to write longer and more complex texts than boys did and to use a larger number of subordinate clauses, adjectives and verbs. A study of topic preferences among children in US schools in fourth, sixth and eighth grades (Peterson, 2000) shows that girls tended to situate their writings in primary territory, characterized by everyday elements and characters, feelings and personal experiences, while boys privileged tertiary territory, linked to natural and fantastic settings, sports, and action. Similar results were found for seventh graders' scientific writing, also in the USA (Levine & Gelman-Caspar, 1996). Boys showed a preference for an informative discursive type, whereas girls did not show any particular preference. As for writing topics, boys were found to prefer technology and creative aspects of science, whereas girls turned to humanistic and social facets. Lastly, girls' compositions were longer, more detailed and presented in a more flexible style and structure than texts written by boys. However, this pattern of differences was not found in the writings produced by students in secondary school (Jones & Myhill, 2007) or university (Francis, Read, & Melling, 2003), indicating that gender traces in writing might fade away as students advance through academic education.

To the best of our knowledge, studies have focused on gender differences at the level of writing products and processes, but the possible differences in how girls and boys conceive of learning to write have not been systematically addressed.

## 2. A review of schoolchildren's conceptions of learning to write

As learners appropriate cultural knowledge, they also generate relatively implicit conceptions about the ways whereby such knowledge is learnt (Claxton, 1990). Getting to know learners' conceptions of learning in different fields of knowledge is extremely relevant for educational research, planning and intervention. These conceptions operate implicitly on learning (Marton, Beaty, & Dall'Alba, 1993) by mediating the processes they put into practice when they are learning and even influence the tacit and recurrent assessment of their own achievements and difficulties. A growing body of

studies provides a picture of how learners at different educational levels conceive of learning in different fields: how they account for what is learnt, the purpose and uses of learning, the kinds of actions and processes involved, and the environmental and mental conditions supporting learning (Marton & Säljö, 1976; Pozo, Scheuer, Pérez Echeverría, Mateos, Martín, & de la Cruz, 2006). We might say that these conceptions work as a sort of hinge between the person who learns and the culture of which she or he is part. In other words, conceptions about learning present a personal or subjective dimension, and at the same time, they are entrenched in particular folk psychologies and pedagogies shaped within given historical times and cultural spaces (Olson & Bruner, 1996).

Generating ideas about how learning occurs is a process that starts in early childhood, always in relation to the learning of specific content and taking place in specific contexts. Pramling's phenomenographical studies (1996) have shown that in preschool years, children progress from conceiving learning as doing, to conceiving it as knowing and, at a further level, as understanding. More recently, it has been proposed that children's conceptions of learning and teaching form implicit theories (Scheuer, Pozo, de la Cruz & Baccalá, 2001b; Strauss, Ziv, & Stein, 2002). According to Pozo et al. (2006), a shift from a direct theory of learning to an interpretive theory takes place during the period extending from the preschool years to early adolescence. A direct theory emphasizes factors that act on the learners from the outside and provoke cumulative learning products consisting of exact copies of external objects or models. In contrast, an interpretive theory is focused on agent learners who activate mental representations throughout the learning process. A constructive theory of learning has been identified in young people and adults who have reflected on the learning process in greater depth. They understand learning in terms of complex and dynamic processes of self-regulation and expression of their knowledge, and acknowledge that learning leads to transformations both in knowledge and in the learners themselves.

During the last decade we have focused on the study of children's learning conceptions in the field of writing. We designed an in-depth individual interview (see Scheuer, de la Cruz, Huarte, Caíno, & Pozo, 2001a) and conducted it with 160 school children in the eight grades from kindergarten to seventh grade in Argentina. Children were presented with verbal questions and graphic tasks referring to several aspects of learning to write. Lexicometric and category analysis of responses showed that by the age of five, children speak about how they have learned to write and how they currently learn, they identify difficulties and ways of overcoming them, outline learning goals, identify writing practices and teaching that have been helpful to them and explain them, reconstruct and imagine interventions directed at helping a child to write, and relate writing to different uses (Scheuer, de la Cruz, Pozo, & Neira, 2006; Scheuer, de la Cruz, Pozo, Echenique, & Márquez, 2009; Scheuer, de la Cruz, & Pozo, 2010). Results revealed that kindergarteners and first-graders viewed writing as a particular graphic object to be distinguished and captured, whilst second-graders and third-graders spoke of writing as a graphic code for the transcription of spoken language.

Fourth-graders seemed to have internalized the principle of graphophonic correspondence and to be dedicating their efforts to automatize typographic and orthographic conventions so as to write simple texts easily and quickly. Children in the last track of elementary education offered explanations regarding the communicative functions of orthography and of visual presentation, which suggest a deeper understanding of these conventions and restrictions. Mention of grammatical analysis indicated a recognition of the structure of writing at a phrasal level. Overall, the ways in which these older children accounted for text composition indicated a view of writing as a transcription of thought (Bereiter & Scardamalia, 1987; Kellogg, 2008).

In these studies we also found, in agreement with the abovementioned framework of implicit theories (direct, interpretive and constructive), that children's conceptions progressed in terms of their internalization of the agency of learning (from external regulation to self-regulation) and increasing complexity of the components of the representation (which not only increase in number but also adopt more complex conceptual relationships). This pattern of change in children's conceptions of learning to write therefore responded to a pattern of progressively more explicit representation similar to that suggested by Dienes and Perner (1999). Children who started from a direct theory of learning first made explicit the *object* of learning. In contrast, on moving to an interpretive conception of learning, children highlighted their attitudes regarding that object of learning, referring to the importance of the processes and mental states which mediate that learning, such as the need to pay attention, to consider the emotional state and preferences of the writer, to try to remember, etc. Only in very few cases, even among older students, did a constructive conception appear, focusing on the representation of the *agency* of the learners, in which the learners conceived of themselves as writers in terms of goals and means deployed for learning to write, and in which they considered themselves as the principal agents in their own learning.

In this series of studies of schoolchildren's conceptions of learning to write, we were struck by differences in the content and form of the responses provided by girls and boys (de la Cruz, Huarte, & Scheuer, 2004). Without knowing whether a given interview belonged to a girl or to a boy, we were quite accurate at predicting the interviewee's sex. The present study is directed at analyzing the scope and quality of such differences more closely and rigorously.

### **3. Towards a gender perspective of schoolchildren's conceptions of learning to write**

Starting with Kohlberg's pioneering research (1966), many studies have been conducted to flesh out how children internalize social gender categories. The process begins at birth, with socialization and the development of a differential experience that usually corresponds to the sexual biological dimorphism (being born male or female). From the age of two, children are able to label themselves and others as boys/men or

girls/women, and hence seem to recognise some essential components of the ways in which gender is embodied and represented in their social group (Hurting & Pichevin, 1985; Lloyd, 1987; Smith & Lloyd, 1978). Preschool children tend to model their behaviour after same-sex models (Bussey & Bandura, 1984) and to reward peers for gender-appropriate behaviour (Bussey & Bandura, 1992). During middle and late childhood, children become increasingly aware that being born male or female is a fact that will mark them for the years to come, although this awareness allows for a variable degree of flexibility in the assumption and expression of gender attributes (Fernández, 1988).

Overall, gender studies put forth that gender shapes the set of values, ideas and feelings orienting men's and women's everyday practices (Burín & Meler, 1998). Maltz and Borker (1982) have proposed understanding certain gender differences in terms of a "two cultures" model. Based on this view, Tannen (1990, 1994a, 1994b) has studied verbal interaction among men and women, considering their conversational contributions and intentions in terms of "genderlects". Her findings indicate systematic differences in the ways males and females (not only adults and adolescents, but also children) signal meaning and contribute to conversations with others of the same or different sex across various contexts (at school, at home, at work). For men and boys, conversation is a means to negotiate and maintain status in a hierarchical social order. They devote their efforts to keeping their independence and avoiding failure. To achieve a higher status in conversation, they provide information, back their position on "facts", provide definitions, establish generalizations and give examples ("report talk"). In relating to the world, women seek to situate themselves as persons within a network of connections. In such a world, conversations are negotiations directed to building and maintaining close relationships and developing intimacy, and hierarchies are related to friendship rather than to power ("*rapport* talk"). In conversing, women and girls look for support from others, provide others with support and seek to achieve consensus. There are differences not only regarding what is said and how, but also what is listened to. Women and girls tend to focus on understanding; men and boys tend to center their attention on resolving situations. Thus, women tend to talk more about their and others' problems, while men tend to privilege the search for solutions (Sordo, 2010).

The pattern of differences in the conversational styles preferentially used by men and women reminds us of the two modes of thought proposed by Bruner (1986): the paradigmatic mode and the narrative mode. Whereas the paradigmatic mode looks for universal truths by means of argumentation, the narrative one establishes particular connections among events. In Bruner's words, these are:

two modes of cognitive functioning (...), each providing distinctive ways of ordering experience, of constructing reality. The two (though complementary) are irreducible to one another (...). Both can be used as means for convincing another. Yet what they convince of is fundamentally different: arguments

convince one of their truth, stories of their lifelikeness. The one verifies by eventual appeal to procedures for establishing formal and empirical proof. The other establishes not truth but verisimilitude. (...) One mode, the paradigmatic or logico-scientific one (...) employs categorization or conceptualization (... It) deals in general causes, and in their establishment, and makes use of procedures to assure verifiable reference and to test for empirical truth (...) The narrative mode (...) deals in human or human-like intention and action and the vicissitudes and consequences that mark their course. It strives to put its timeless miracles into the particulars of experience, and to locate the experience in time and place. (...) The paradigmatic mode, by contrast, seeks to transcend the particular by higher and higher reaching for abstraction, and in the end disclaims in principle any explanatory value at all where the particular is concerned (pp. 11-13).

It seems to us that despite the very different concerns that orient the work developed by Tannen and by Bruner, the patterns of differences they have identified are closely related. We propose to connect such patterns in the following terms: it may be the case that in Argentinian culture the paradigmatic mode is closer to men's ways of accounting for their experience and communicating their position and views, whereas the narrative mode is more compatible with women's ways of convincing others by making comparisons to events in life. This mode seems to be deeply related to a need to sustain and be part of a network of connections (*rapport* talk). Men's preference for the logico-paradigmatic mode (that seeks to convince through verifying evidence) may be related to the strategies displayed in order to maintaining a status in the social world (report talk). Our study of gender-related differences in children's conceptions of learning to write draws on these distinctions between modes of discursive production and between modes of cognitive functioning.

#### 4. Aims

Given that a) children's learning conceptions mediate their learning processes, b) children develop learning conceptions in the field of writing, and c) gender organizes children's social experience, in this study we explore if and how gender operates in the ways girls and boys conceive of learning to write. Our aims are to establish whether gender differences appear between the conceptions girls and boys express about learning to write, and in such a case, to identify, describe and interpret such differences within a conceptual framework that distinguishes two different modes of discourse (*rapport* and report talk) and thought (narrative and paradigmatic), drawn mainly from the contributions by Tannen and by Bruner reviewed above. Hence, our research questions are:

- Are there relevant differences in the ways girls and boys attending basic education in Argentina account for learning to write?

- How do these differences operate in children's responses at the levels of content and form?
- Do such differences present connections with the gender-related conversational patterns described by Tannen?
- Do such differences present connections with the two modes of thought identified by Bruner?

On the basis of a common background, consisting of an interpretative theory of learning to write (Scheuer et al., 2006; Scheuer et al., 2009), we expect to find gender differences engaging both content and form, with girls tending to adopt a *rapport* talk style and privileging a narrative mode in their responses, and boys adopting a report talk style and privileging a logical-paradigmatic mode.

## 5. Methods

### 5.1 Participants

Participants were 160 children attending public schools in two middle-sized cities in North Patagonia, Argentina. Schools were selected based on the interest shown in participating in the study and the socio-cultural heterogeneity of their population (ranging from low to middle socio-economic status, with parents' formal education ranging from incomplete primary studies to university studies). Participants were equally distributed by gender among the eight school grades from kindergarten to seventh grade (10 girls and 10 boys in each grade). Children with special needs or who had repeated one or more school years were not included. At all of the schools, children attended either the morning or the afternoon session.

In Argentina, compulsory education begins with kindergarten at age five. For an overview of ways in which children learn to write in informal and formal educational contexts, we interviewed 10 parents and 10 teachers (de la Cruz, Scheuer, Baudino, Huarte, Sola, & Pozo, 2002). Parents reported that their children had begun to write at home. Most teachers stated that they framed their work within regional curricular guidelines (CEPRN, 1990). According to such standards, kindergarten teaching emphasizes a variety of communicative and referential uses of writing as well as the writing of names. Systematic teaching of alphabetic writing begins in primary school. First to third grades are devoted to the basic rules of alphabetic writing (using block letters in first grade and later, cursive handwriting). Teachers progressively introduce resources for producing and reading simple texts, such as identifying and developing writing purposes and subjects, taking communicative contexts into account and using punctuation marks and capital letters. Fourth and fifth grades are characterized by working with new and varied writing supports (a landmark is the passage from notebook to ring binder), aims, formats and genres. Orthography is emphasized. In sixth and seventh grades, writing appears as a tool to obtain and demonstrate knowledge and also an object of metalinguistic and literary reflection.

The results of the official national assessment of third- and sixth-graders' achievement in Language are a matter of concern, with low-achievers accounting for almost one third of the sample for each grade. Performance in the Patagonian region (where this study is located) is slightly better than the national mean (DINIECE, 2009).

## 5.2 Procedure

Female researchers interviewed children individually in a quiet room at school at the beginning of the school term for approximately 30-40 minutes. The interview followed a structured script (Scheuer et al., 2001a) with five main sets of open questions referring to: children's processes of learning to write, processes of teaching to write, social help provided by an adult to support a child's learning, content of thought at different times during text composition, and personal and family writing practices. Interviews were taped and fully transcribed.

## 5.3 Analysis

In order to analyse whether children's responses to the questions in the interview varied according to gender, and to identify what such variations were, we combined lexicometric analysis and category analysis. The entire process of analysis was carried out in Spanish. The responses presented in this text are translations into English of the Spanish transcriptions.

### 5.3.1 Lexicometric analysis of the complete corpus of children's responses

Lexicometry (Bécue Bertaut, 1991; Lebart & Salem, 1994; Lebart, Salem, & Bécue Bertaut, 2000) was used in order to a) establish whether there were statistically significant differences between the vocabulary girls and boys used in their responses to each of the five sets of questions, and b) obtain girls' and boys' most typical complete responses (or "modal responses") for each set of questions showing statistical gender differences. The *SPAD Recherche* software (*Système Portable d'Analyse des Données Textuelles*, 1996, version 5.6) was used. The corpus considered in this analysis contains the transcribed responses provided by the 80 girls and the 80 boys to the five sets of questions. As is customary in lexicometric studies, children's responses were transcribed according to "dictionary words", based on the conventional grammar rules established by the *Real Academia Española* for Spanish language.

In order to distinguish the sets of questions for which children's responses showed statistically significant lexical variability according to their gender, Correspondence Analysis (Greenacre, 1984; Greenacre & Blasius, 1994; Greenacre & Blasius, 2006) was applied to the lexical table for each set of questions. A lexical table is a contingency table where rows correspond to all participants (hence we have 160 rows) and columns correspond to all the different words appearing more than a given number of times in the complete corpus (i.e., a frequency threshold is established for the part of

the corpus corresponding to each set of questions). Each cell in the lexical table reports the frequency with which each of these words appears in the full response given by each participant. A Correspondence Analysis was applied to each of the five lexical tables (one for each set of questions), considering *words* and *participants* as active variables. Children's gender was included as an illustrative or complementary variable. In Correspondence Analysis, active variables define dimensions (also called components, factorial axes, or factors). Illustrative variables do not contribute to defining such dimensions, but allow the structure of the information provided by active variables to be illustrated (Crivisqui, 1993). The null hypothesis – that there are no lexical differences between girls and boys – is rejected if gender modalities (F and M) obtain a test value  $\pm 1.96$  ( $p < .05$ ) on one or more dimensions. Test value is a statistic that allows to test this null hypothesis and is equal to the distance – in terms of number of standard deviations – of each modality to the centre of gravity on the dimension  $\alpha$  (Bécue, 1991). This test value allows to assess whether a given modality is statistically important to characterize a dimension, or it is not. In the context of the SPAD software, test value is expressed in terms of a normal centered and reduced distribution. According to customary criteria (Crivisqui, 1993), the number of dimensions we took into account to measure test value were those preceding an abrupt decrease in the percentage of inertia or variability explained by their eigenvalues.

Once the statistical importance of the gender variable was found for a given set of questions, a lexicometric procedure was applied in order to obtain the most typical responses provided by the 80 girls and the 80 boys respectively. In the context of the SPAD software, this is the Automatic Selection of Modal Responses procedure (Modal Responses procedure for short). Let us note that this procedure does not operate with the results provided by Correspondence Analysis. The Modal Responses procedure arranges the original complete responses typical of the participants in each modality (girls or boys) in decreasing order, by calculating the  $\chi^2$  distance between the lexical profile of each participant and the lexical profile of the part of the corpus formed by the responses provided by all the participants in the corresponding modality (Lebart, Salem, & Bécue-Bertaut, 2000). The first modal response (for, say, girls) is the closest one to the lexical profile of the responses provided by girls, and so on. As customary in this kind of analysis, several modal responses were taken into account for the qualitative analysis of each gender modality (we considered the top 10% of responses for each modality). Thus, modal responses are not artificial summaries of the responses given by a group, but real responses that have been automatically selected due to their representative character for a given modality of participants. The Modal Responses procedure allows words to be situated in their immediate context of production, thus remediating the fragmentary nature of any study restricted to isolated words. Several complete modal responses according to gender are presented in Appendix A.

### 5.3.2 Qualitative description of modal responses by girls and boys based on category analysis

On the basis of careful reading of the gender modal responses for the sets of questions revealing gender differences at a lexical level, we developed two sets of descriptive categories, one regarding content and the other concerning form. The distinction between content and form can be used to analyse different textual genres, including the sorts of autobiographical narratives and psychological attributes we examine in our data. Bruner and Weisser (1991) point out that from an early age, autobiographical narratives are bound by strong conventions regarding what we say when we speak about ourselves and how we say it. While in lexicometry the unit of analysis is the word, category analysis was applied to meaning units involving one or more words which, taken together, conveyed a personal meaning. The process of category systematization involved going back and forth from the impressions derived from reading these responses to the conceptual contributions stemming from our previous studies of children's thinking about learning to write (Scheuer et al., 2009), as well as from the contributions by Tannen and by Bruner reviewed in the Introduction.

**Content categories.** Based on the assumption that children conceive of learning to write in terms of an interpretative implicit theory, the following main components were considered: learner's (or writer's, in the case of the questions about family practice of writing) dispositions, mental states, overt actions and mental processes; teacher's mental states, dispositions and ways of supporting learning (by "teacher" we refer to any person that the child mentioned as performing a teaching activity, regardless of age and pedagogical status); and uses of writing. Within each component, categories captured the different foci children adopted, according to modal responses. Components and categories for content are presented in Appendix B, Table B.1. Since children have been found to speak about various components of learning when accounting for a particular learning situation (Scheuer et al., 2001b), reference to any component was analyzed across sets of questions.

**Form categories.** We distinguished the following features of form in children's ways of organising their verbal responses: hierarchical order; series of particular cases or actions; distinction of particular cases; recovery of personal history; delimitation of categories; providing examples for categories; regulation and duties; justification; metadiscursive comments. Form categories are presented in Appendix B, Table B.2.

In order to guarantee inter-coder reliability, two researchers independently categorized the modal responses for girls and boys for each set of questions. Two other researchers then checked that categorization. Disagreements were settled by discussion. When agreement was not attained, the category involved was not applied to the fragment being analyzed. Next, two researchers prepared a description of the modal responses given by girls and by boys for each set of questions, according to the

categories identified for content and form. Two other researchers checked this description and, if necessary, completed it.

In Appendix A, we illustrate the identification of categories of content and form in modal responses for each gender for each set of questions. These texts (translated from Spanish) are included in order to allow interested readers to have closer contact with girls' and boys' voices, as well as with the categorization process.

## 6. Results

### 6.1 Lexicometric Analysis

In the five Correspondence Analyses applied to the lexical tables for the 160 children (one for each set of questions), we considered the dimensions preceding an abrupt decrease in the percentage of inertia or variability explained by their eigenvalues. Such change occurred after the second dimension in the Correspondence Analyses for three sets of questions, and after the third one in the remaining two. In the dimensions retained in each Correspondence Analysis, we analyzed the test values obtained by each gender modality (M: male; F: female), with the purpose of determining if the vocabulary used by the group of 160 children in their answers to the five sets of questions varied according to their gender. In Table 1 we report such test values for the five sets of questions, respectively.

**Table 1.** Test values obtained by both gender modalities on the selected dimensions of the Correspondence Analysis for each question set.

Question set	Dimension 1		Dimension 2		Dimension 3	
	M	F	M	F	M	F
Process of learning to write	1.46	-1.00	3.05**	2.08*	-	-
Process of teaching to write	0.08	-0.09	-1.35	1.41	0.97	-1.01
Social help provided to support learning	0.48	-0.42	-2.46**	2.13*	-3.49**	3.02**
Content of thought during text composition	0.32	-0.27	-0.04	0.03	-	-
Personal and family practice of writing	-2.51**	2.26*	-0.26	0.23	-	-

**Note.** Test value=distance, in terms of number of standard deviations, of each modality (M and F) to the centre of gravity on the dimension  $\alpha$ . \* indicates  $p < .05$ , and \*\*  $p < .01$ .

Since statistically significant lexical differences for gender were observed for sets of questions regarding learning process, social support and writing practices (see Table 1), we applied the Modal Responses procedure to those three sets of questions, in order to select the most typical responses among those offered by girls and boys, respectively. We now turn to describing the characteristic content and form features we have identified in the most typical responses provided by boys and girls for each of these three sets of questions. Readers interested in following the process giving rise to these condensed descriptions may consult Appendices A and B.

## 7. Description of modal responses about the learning process, social help and writing practices

### 7.1 Process of learning to write

The following questions were asked:

- How do you learn to write? What do you do in order to learn?
- Is there anything you find especially hard when you're learning to write? What do you do then?
- How do you realize that you're learning to write better and better?

#### 7.1.1 Boys

**Content.** When boys accounted for how they learned to write, they tended to speak about a series of mental dispositions, among which they emphasized attention and tenacity. Many boys said that these dispositions depended on external regulations imposed by an adult teacher – either at home or at school – in order to make the learner's behaviour, dispositions and knowledge fit into expectations of correctness and desirability. Boys seemed to appreciate when their teachers made them write and provided them with information. They described their own initiative in triggering a variety of activities and mental processes: practising again and again, either to consolidate what they had learnt or to overcome difficulties; searching for information when they lacked some knowledge or had any doubts, and monitoring their own production. Many boys pointed out that their attention foci and their writing habits changed as their knowledge increased.

Boys tended to speak of the pleasure they experienced when they could challenge and test their own competence. They also vividly accounted for the steps they carried out in solving problems. When boys mentioned negative knowledge states, they usually situated them in a time preceding learning and specified possible solutions, such as looking for information or practising again and again, until they achieved a level of mastery allowing them to apply or demonstrate their knowledge in a variety of situations. Many of the participating boys found that the external control that adults in their family exerted to ensure that they fulfilled their homework and other school duties, was helpful. When asked about indicators of learning, boys said that they

noticed they had learned when they became aware of their possibility of retrieving or demonstrating what they had learned with confidence and ease.

**Form.** Boys arranged their ideas hierarchically, according to a predominantly objective scheme. They justified their statements proactively and retroactively, as they provided explanations involving causes, conditions, effects, results or aims. They also enunciated general norms governing production and behaviour, which they as learners and/or writers had to respect. They specified the scope of the notions they used, by marking conceptual relations of difference, proximity or inclusion. They provided examples as a way of both ensuring that the interviewer understood what they were saying and of backing their ideas with empirical evidence. Boys' metadiscursive comments were directed to confirming their own statements.

The following fragments of the first modal response ( $\chi^2=0.86$ ) coming from boys to these questions condense most of the content features (learner's tenacity, attention as deliberate focusing, knowledge and ignorance, uncertainty, confusion; searching for information, practising, testing competence, problem solving, retrieving knowledge; teacher directing learner's actions and regulating his mental states) and form features (hierarchical order; justification through expression of causes, conditions, effects and purposes; establishing and distinguishing conceptual categories; providing examples for categories; regulation and duties, submission to rules; metadiscursive comments directed to confirm his own statements) described above. For the sake of clarity, in each interview quote we have only indicated the *first time* each category is evidenced in the selected fragments. In Appendix A, the complete categorization is provided according to codes presented in Appendix B. In all the subsequent quotes we proceed in the same way.

Juan (11 years and 3 months; fifth grade). *Perseverance* (learner's tenacity). *First and foremost* (hierarchical order), *perseverance, because at the first, second, or third try, it won't come out...* (justification through expression of causes, conditions, effects and purposes) *Uh... willingness! Because without willingness, there's no work, you can't do anything. Uh... and more than anything, the main thing would be those first two. And well, and then, to listen well, to pay attention* (learner paying attention). *Not getting distracted because you can't be chatting in the middle of a class, when they're explaining something about verbs* (teacher collaborating with the learner through information), *because in a test* (teacher regulating the learner's mental states by means of assessments) *if you don't know it* (learner's knowledge and ignorance), *you're done for. That's the main thing: paying attention, perseverance. (...)* *When you have a doubt* (learner's uncertainty, confusion), *you have to* (regulation and duties) *ask* (learner searching for information). *Most children, when they had a doubt, didn't ask. That's the most important, one has to ask, because otherwise...* *Practising* (learner practising) *with my mother at home, who made me write* (teacher directing the learner's actions), *helped me a lot. Uh... and teachers. Because if you don't have a teacher who*

*encourages, who encourages you, or keeps you within the limits...* (teacher regulating the learner's mental states by means of restrictions). *If they don't keep you within the limits, you have no habits, you don't feel like fulfilling your tasks. You say: "no, if she doesn't care, why should I do the homework?"* The kind of teacher (establishing conceptual categories) *has an influence too.* (...) *They are two different things* (distinguishing conceptual categories). *Learning is something you don't know. But practice is something you know but you don't remember* (learner retrieving knowledge). (...) *That's the difference.* (...) *I get stuck with the stories. It must be that* (metadiscursive comments directed to confirm his own statements). *There I stop, I take the sheet and I start thinking. For example: "now the prince is here... what shall I do? How do I tell him that he found the sword and kills the dragon? Or did he find an axe?"* (providing examples for categories) *You start thinking like that, until... ping! The light switches on and you start to write* (problem solving). *When the verbs are rather difficult, you may not figure them out. But I like to do that* (learner testing own competence; learner's likes and preferences).

### 7.1.2 Girls

**Content.** When girls accounted for how they learned to write, they tended to talk about ways in which a knowledgeable adult in the family or a school teacher had helped them. They said that the adult collaborated with them by means of demonstrations, by providing information or by engaging in joint productions in order to support their learning, and sometimes by checking the adequacy of their knowledge. To many girls, the meaning of this teaching/learning interaction was that, in the long term, it would allow them to carry out the expected role of women in intergenerational transmission. Girls tended to speak of a diversity of mental states they experienced as learners of writing: likes and preferences, attention, and mostly negative epistemic states as ignorance, confusion and uncertainty. In addition to mentioning practising and searching for information from external sources as mental processes intervening in learning to write, girls spoke of connecting with their subjective experience.

When talking about difficulties they encountered, many girls spoke of ignorance, confusion and negative emotions, such as frustration and anxiety. They said that in order to solve their difficulties and to cope with external controls of what they knew, they looked for information from authorized sources and practiced in order to record the new knowledge. When asked for indicators of learning, girls spoke of the possibility of knowledge retrieval under situations of external control.

**Form.** Girls structured extensive passages of their responses by recovering and linking up unique episodes of their own personal history, frequently bringing in the voices of other persons, such as their mother, teacher or friends, through reported speech. Girls also linked particular cases that they presented as being interesting in themselves. Though on occasions girls provided causes, conditions and/or effects, their justifications

mostly operated by linking various problems and situations. Their metadiscursive comments consisted of presenting some of their ideas in terms of personal opinions and of limiting the scope or certainty of their own statements. Girls only rarely spoke of general ways of doing or writing at a stage of their history, specified a category or offered an example.

The following fragments of the first ( $\chi^2=0.80$ ) and second ( $\chi^2=0.83$ ) modal responses coming from girls to these questions condense most of the content (learner's likes, doubts, anxiety, attention as a duty, searching for information, connecting with personal experience; teacher's knowledge teaching as an assigned social role and as consisting of collaborative, dialogical support and of assessments of learner's mental states) and form (series of cases and of actions; particular cases and episodes; recovery of personal history through general modes of doing or of thinking at given ages or moments; personal opinions) features described above.

Ana (10 years and 9 months; fifth grade). (...) *my mother taught me to make those pretty little cards, anyway she taught me to make stuffed dolls, a lot of things she taught me, little chains, those that show up downtown* (series of particular cases). (...) *she knows how to make them* (teacher's knowledge). *A teacher, when she speaks to you, it seems to me* (expression of personal perspective) *you have to* (regulation and duties) *pay attention* (learner's attention). *Because one day in the future you'll be grown up and you're going to have children and you'll teach your children* (teaching as an assigned social role). *I learned little by little, I began to practice* (learner's practising) *then my private teacher taught me and she began to teach me everything, and also from books. With books, she had a little book I liked a lot* (learner's likes and preferences), *it was about... about... about... oh, I don't remember!* (expression of current mental state) *She said a word and I said another one.* (...) *I wrote the letters and then I asked my aunt what it said* (learner searching for information) *and she told me and then she asked me what it said and I had to start spelling the letters and putting them together* (teacher regulating the learner's mental states by means of assessments) *and I learnt that way* (teacher collaborating with the learner through joint production, demonstrations, information; recovery of personal history through episodes).

(...) *I learnt not very easily because it's difficult to go to school when you're little and you're just beginning first grade* (recovery of personal history through general modes of doing or of thinking at given ages or moments) *and I got the sums a little wrong* (justification through chains of situations and problems).

Luisa (12 years and 2 months; sixth grade). *So I said: "what is writing"?* *So I tried to experience what writing was for me* (learner connecting with subjective experience; recovery of personal history through episodes, including reported speech).

## 7.2 Social help provided to support learning

The following questions were supported by two black and white picture cards depicting a child (boy or girl, according to the interviewee's gender) sitting at a table and writing, with a female adult (in one of the pictures, she represents the child's mother and in the other, a schoolteacher) standing by the child. Questions were:

- The boy (or girl) is writing at home and his mother (or teacher) is helping him. What is the mother doing to help him? What is she telling him?
- And what if the boy doesn't get it right? And what might the boy be asking his mother?
- And so, do mother and teacher help the same way?

### 7.2.1 Boys

**Content.** Many of the participating boys accepted that the teacher collaborated with the child only under particular circumstances, such as during initial learning steps or when the child was distracted. They accounted for the teacher's facilitations in terms of indicating actions that the learner should perform, and emphasized the need for or advantage of carrying out such actions independently. Boys tended to attribute to the child in the picture negative knowledge and states of attention, pointing out that the regulation exerted by the teacher contributed to changing the sign of such mental states and to ensure the child could retrieve what he had learned.

**Form.** Boys tended to structure their responses from a normative standpoint, referring once again to what the learner must (or must not) do in order to learn. It was also from such a normative frame that they accounted for the series of actions that the teacher must perform to help the child in an effective way. Boys established a hierarchy among the types of support provided by or requested from the teacher according to their frequency, and they justified the value of such support by accounting for causes, conditions, effects and purposes. Boys also specified the meaning of some terms. They made their own perspective explicit. They rarely retrieved an episode from their early history as writers.

The following fragments of the first modal response ( $\chi^2=0.78$ ) coming from boys to these questions condense most of the content and form features described above.

Joaquín (6 years and 10 months; second grade). *That it's not that way, that the mother tells him, because it's him who has to say, he has to do it all by himself (...) because then he doesn't know (...) and then he has to do it but not to copy it. If he does it wrong he has to erase it all and do it again so as to know more. (learner's knowledge and ignorance; regulation and duties; justification through expression of causes, conditions, effects and purposes) Telling him to write down things or if not, if he writes something wrong, to erase it and to write, to write what must be written, and to make*

*the answer.* (teacher directing the learner's actions; teacher regulating the learner's mental states; series of actions).

### 7.2.2 Girls

**Content.** Girls tended to anchor the need for help in the learner's uncertainty. They mostly referred to the family's or schoolteacher's collaboration through demonstrations of how to write or through encouraging the child to do so. They also spoke of how the teacher told the child the actions she had to carry out, within a framework of graduated and repeated practice. Girls spoke about several conditions concerning the teacher, such as her epistemic authority and availability. They also considered the effects such conditions bore on the learner's mental states. Girls spoke about the learner's preferences and feelings as factors influencing how much advantage she may obtain from family and school help.

**Form.** Uncertainty also permeated the form of girls' responses. They compared the quality of the help provided by mother and teacher (even before they were asked to do so) and, at times, they did not succeed in selecting the one who provided the best help. In this process of alternating between mother and teacher, many girls made their own doubts and opinions explicit. They accounted for a diversity of cases, actions and episodes of their own learning history. Girls' justifications consisted of series of situations and problems. Occasionally, they identified causes, conditions, and effects.

The following fragments of the first ( $\chi^2=0.74$ ) and second modal ( $\chi^2=0.84$ ) responses coming from girls to these questions condense most of the content and form features described above.

María (10 years and 4 months; fifth grade). *Perhaps the girl doubts, doubts about something* (learner's doubts) *and she asks the mother* (learner searching for information). *And the mother teaches her to write the word, to read it. And she helps her better. She's repeating, repeating for her and she helps her. It might be to repeat, repeat and repeat* (teacher collaborating with the learner through joint production, demonstrations, information). *And writing it many times. Well, there she begins to make it better* (learner practising; series of actions). *And..., how do you write for example, the doubt I had about* (expression of current mental state)... *because perhaps (the teacher) explains it better to her than the mother. Because the mother can explain it to her, but maybe she doesn't know it so well* (teacher's knowledge; justification through chains of situations and problems). (...) *Perhaps if she's in first grade she doesn't know the abc so well* (learner's ignorance; justification through expression of causes, conditions, and effects). *And perhaps she (child) can ask her (teacher): "what is this letter?" and she (child) begins it... as they made us write the (letter) "a" lots of times in the little notebook* (teacher directing the learner's actions) (...) *Like they did to us* (recovery of

personal history through episodes), *something like that. But not the same* (distinction of particular cases).

Inés (12 years and 1 month; sixth grade). *Sometimes teachers, as they study, they can also know more than parents* (teacher's knowledge). *But sometimes, if the girl doesn't like the teacher very much* (learner's likes and preferences), *that depends on the girl* (distinction of particular cases). *If she doesn't like the teacher for sure she likes it better for her mother to teach her to write.* (learner's moods and feelings; justification through chains of situations and problems)

### 7.3 Personal and family practice of writing

The following questions were asked:

- Does anybody write at home? Who are they? When do they write? Is there anybody else...? What do they write for?
- And how did you begin to write? Where, with whom? What sorts of things did you do when you were just beginning to write?

#### 7.3.1 Boys

**Content.** Boys tended to locate the writing practices performed by adults in their family (whether men or women) at their workplace and occasionally mentioned an epistemic use of writing on the part of men. In contrast, they located their own writing practices together with those of their siblings (whether boys or girls) in the educational setting.

**Form.** Many boys justified writing practices by stating their causes, conditions and purposes and described writing as something they were obligated to do. They established distinctions among categories of practices and provided some examples for them. They expressed their own epistemic perspective or restrained the scope of their statements.

The following fragments of the first ( $\chi^2=0.87$ ) and sixth modal ( $\chi^2=0.91$ ) responses coming from boys to these questions illustrate the description above.

Marcos (8 years and 15 days; third grade). *Only sometimes* (restricting the scope of what he is saying) *when I do my homework* (educational use of writing). *My father only sometimes, when he answers the phone, numbers or things in his work* (professional use of writing) (...) *to remember numbers, to know measurements, and yes, maybe to remember measurements* (epistemic use of writing), *say* (providing examples for categories), *when he's going to make a house, because my father makes railings* (justification through expression of causes).

### 7.3.2 Girls

**Content.** Girls accounted for different uses of writing when they spoke of the situations in which either the women or the men in their family wrote. In the case of their mother (or aunts), they mentioned uses related to adult education, communication within the family and with oneself (keeping a diary). In contrast, they placed the father's writing practices in his workplace. When they spoke about their own writing practices, girls referred to the same kinds of uses they had attributed to the other women in the family: educational; epistolary and intimate. It was the intimate use that they displayed in the most extensive and detailed way, since they specified moments, moods, objects, textual types, as well as processes whereby they monitored their own writing production and they made their subjective experiences explicit. Moreover, exclusively referring to themselves as writers, they mentioned a literary use. They also set writing in the context of fictional play, where they performed the teacher's role.

**Form.** When girls spoke of family and personal writing practices, they recovered their personal history mainly by narrating episodes and occasionally by reporting general modes of doing something at a given time. They made their personal perspective explicit. When they talked about the writing practices performed by their relatives, they mentioned particular traits. They justified the practices they mentioned by connecting multiple situations and problems and, occasionally, by mentioning purposes. In a few cases they talked about the need to adhere to norms.

The following fragments of the first ( $\chi^2=0.80$ ) and second ( $\chi^2=0.84$ ) modal responses coming from girls to these questions illustrate the description above.

Eva (11 years and 8 months; sixth grade). *My father works as a waiter. And he writes when he has to write down notes and such things (professional use of writing; regulation and duties) (...) My aunt Cato, the one who lives at the back (distinction of particular cases), perhaps she writes more (than Mother). She has to do an internship because she will graduate as a forest ranger, she's studying in Misiones (educational use of writing). She's got a notebook where she writes, she also wrote, sent us letters (epistolary use of writing). I know that she has a notebook. I'm sure that (expression of personal perspective) she's also writing there (intimate use of writing). Because she spent two years alone, there (justification through chains of situations and problems). And well..., I have a... because I went through a lot of stages because there was a time when my parents split (recovery of personal history through episodes). And I have a diary, but I was always renewing it (learner monitoring products and processes on-line). (...) And when I feel badly (learner's moods and feelings), I get to writing everything I feel, or what happens to me, so as not to tell it to anybody else (learner connecting with subjective experience; justification through expression of purposes).*

Lia (9 years and 2 months; fourth grade). *For Children's Day my mother wrote me a letter (epistolary use of writing). But I almost never see my father writing. (...) Sometimes*

*I write letters, sometimes I write poems* (recovery of personal history through general modes of doing; literary use of writing).

### **8. Towards a synthesis: Content and form features in girls' and boys' responses**

Both boys and girls tended to refer to the same components of the conceptions of learning to write: teaching, learner's mental states and dispositions, and uses of writing. Boys and girls granted a place to the learner's mental world in their responses. They acknowledged a range of states and processes that mediate learning and writing practices, either when they talked about their own learning or when they spoke about a fictional character who was receiving or requesting help. In this respect, schoolchildren of both genders tended to display an interpretive implicit theory of learning. When we analyze the features of content that they specified within those components and the form of their responses, however, distinctive gender differences appear in some of the foci and the resources girls and boys adopted in the frame of this implicit theory of learning.

As to content, several features appeared exclusively in girls' typical responses. Girls tended to speak about their own responsibility in intergenerational cultural transmission, projecting themselves as adults who would teach their own children. It was only in girls' modal responses that we found references to some particular categories of mental states experienced by teachers or by learners. With respect to the teacher, girls tended to speak of his/her knowledge and availability. With respect to the learner, many girls mentioned moods, feelings and uncertainty. Connecting with subjective experience as a process intervening in learning to write was only evidenced in girls' modal responses. Uses of writing oriented towards communication and recreation – epistolary, intimate, play and literary – were only mentioned by girls. Instead, the few features of content that appeared only in boys' typical responses were related to experiencing learning as a challenge. In their modal responses, boys spoke of tenacity as a disposition for learning, testing one's own competence and problem solving. References to an epistemic use of writing were provided only by boys.

If we go through the relative emphases with which the different features of content appeared in the responses of girls and boys, we find that while girls privileged collaboration with the learner as a way of teaching, boys sometimes rejected it and privileged external regulation of the learner's mental states and dispositions instead. Attention as a necessary disposition to learn to write occupied a larger place in boys' responses than in girls', as they talked more about their likes and preferences.

Regarding features of form, girls' responses were characterized by their distinguishing particular cases and by linking up cases, actions, situations and problems. They also retrieved their personal history through real-life episodes, where they brought in the voices of the people involved. Girls made more comments than boys did about their epistemic states concerning what they were saying and presented

their opinions explicitly. Boys identified hierarchies among the issues that they dealt with when writing. Another characteristic feature was their attempt to be precise; delimiting and exemplifying conceptual categories. They retrieved their personal history mostly in terms of general ways of doing or thinking at given ages or school levels. At a metadiscursive level, boys tended to introduce comments that sought to deepen or assert their own understanding of what they were saying.

To sum up, results from the Correspondence Analyses showed relevant differences between the ways in which girls and boys attending basic education in Argentina accounted for learning to write. Analysis of modal responses showed that these differences engaged both content and form discursive dimensions. In the next section we sketch two gender-related patterns of accounting for learning to write in childhood. In doing so, we take into account Tannen's distinctions regarding male and female conversational styles and aims, as well as Bruner's distinctions regarding specifically human ways of organizing and accounting for experience.

### **8.1 Two (gendered) ways of accounting for learning to write?**

The results we have described seem to be in line with Tannen's findings (1990, 1994a, 1994b) about variations in conversational styles according to the speaker's gender. When boys accounted for the processes of learning to write, about family and school social help supporting such processes, and about family and personal writing practices, their discourse was oriented towards preserving agency, marking their independence, asserting themselves and negotiating personal status. In contrast, girls showed a relational style by devoting much of their talk to establishing connections (*rapport* talk). In doing so, they recalled personal experiences which could be easily understood by others, and shared private information, thus contributing to the constitution of their subjectivity and generating a meeting space with the interviewer.

Boys' use of language seemed to be regulated by principles of coherence and non-contradiction. They put into practice procedures for establishing hierarchies, conceptual differentiations and generalizations. Boys sought to impose their positions when they offered definitions with clear-cut frontiers and backed their statements with empirical evidence and reasoning. They showed pleasure and readiness to face challenges, which appeared to increase their personal self-confidence and assertiveness. Although the boys said their learning was rooted in heavy external regulation based on rules, they also appreciated independent performance of tasks, mostly rejecting collaboration with someone who is more knowledgeable. They viewed differences between the school and family teacher in objective terms that dealt with what was being taught in each context.

In general terms, most of the participating boys' discursive modalities presented traits closely aligned with those proposed by Bruner (1986) in his portrait of the logical-paradigmatic mode of thought. Girls, instead, tended to integrate a set of procedures characterizing a narrative modality. They spoke at length of human actions, intentions

and feelings, as well as their effects or consequences. Girls usually linked up cases, situations, problems and purposes and recalled experiences that they readily connected to learning to write, even though such experiences might appear to go beyond the focus of the question. In their responses, girls moved from one particular thing to another, noticing similarities without losing sight of peculiarities and providing details of privacy. They anchored their references to learning to write in their personal experiences, and they assumed and made their perspectives explicit. They talked in relative terms and used an interrogative intonation or self-directed questions, seeking to convey their experiences or gain their interlocutor's approval or complicity. Girls frequently hinted at teachers' epistemic authority and pedagogical attitude as a way of accounting for the differences they observed in the ways they teach. They set the pedagogical relationship within an affective relationship regulating the course and success of teaching. They projected themselves as future teachers, thus assuming the traditionally feminine role in cultural transmission. Variations found between boys' and girls' discourse when they talked about learning to write are consistent with the topic preferences the different genders have shown through their writing (Peterson, 2000). While girls favoured topics related to the personal world, boys turned to the world of action and to the search for objectivity through the contribution of empirical data.

When girls accounted for the uses of writing, the degree to which it seemed to permeate their everyday life was remarkable. In fact, writing was involved as much in academic activities as in play, or in the unfolding of intimacy. Girls tended to speak of a range of writing uses, extending from work, education, social and private communication. Occasionally, writing was a substitution for a reliable interlocutor. They related writing production to their moods and to the telling of personal experiences. Boys, instead, related writing practices performed by the adults in their family to work and to knowledge management, while they restricted their own practices and those of their siblings to educational settings. Girls distinguished among writing practices performed by men and women in their families (limiting masculine practices to work), whereas boys assigned the same (few) kinds of practices to both genders. Boys gave a larger place to submission to rules and duties than girls did in justifying writing practices or accounting for their motives.

## **9. Educational implications**

Along with these conclusions related to the theoretical aims of the study, we believe that the data obtained on boys' and girls' different ways of talking about writing have relevant implications for teaching children to write.

The fact that boys and girls tended to represent their role as learners of writing in different ways shows how important it is that teaching should focus not only on providing pupils with the best writing processes and strategies, but also on helping them to construct a more complete view of themselves as learners of writing. As Bruner (1996) noted, it is important for pupils to acquire knowledge and skills related to how

they conceive themselves as learners; in this case, of writing. As Pramling (1996) showed, school learning should focus on promoting not only mastery of the object of learning, but also early reflection on learners' own processes and activities which make that learning possible, so that this metacognitive activity may promote, even in preschoolers, more complex conceptions of their own possibilities as learners.

Based on the data obtained in this study, we believe that teachers should know more about the representation that boys and girls have of learning writing, and should consider the different ways in which girls and boys represent themselves while learning to write. The identification of two distinct forms (more narrative in girls, and more paradigmatic or analytic in boys) shows that it is important for teachers to reflect on the usefulness of complementing or integrating the two approaches in their teaching. Although there are different positions on its incompatibility (Bruner, 1985) or on the possibility of integrating the two points of view (Olson, 1994), we believe that school should at least help both boys and girls to attain a more complex view of themselves as learners, helping boys to gain a more narrative vision and girls to adopt a more analytical approach when tackling their learning. However, if schooling, and more specifically literacy, is aimed to provide boys and girls with the epistemic tools for understanding their cultural heritage, it must offer them not only analytical understanding, but also, as Egan (1996, 1997) has defended, other kinds of understanding (mythic, romantic, even ironic and somatic), which are closer to the narrative approach to knowledge.

Thus, it seems particularly important to promote a narrative approach to boys' and girls' own learning experiences of writing, particularly considering that, as Bruner (1985, 1996) has already stated, in school education there is a prevalence of the paradigmatic or analytical approach to learning. The narrative approach is relegated to the plane of the subjective, less highly valued than access to objective learning in school contexts. Showing a concern for this situation, some current approaches to learning design (see Sawyer, 2006) highlight the importance of promoting the learner's identity through the construction of his/her own voice as a learner and also as a writer, all the way from primary education to university (Ivanic, 1998).

Finally, this study should contribute to opening new approaches for researching gender differences in learning writing. The study we have presented is clearly exploratory. In fact, it was not originally designed to tackle gender differences. Further studies, designed from the start to study gender traces in learning to write, should consider the relationships among the conceptions of boys and girls regarding learning to write, and the learning practices in which they are immersed in both family and school contexts. Moreover, as those learning practices will be largely mediated by how male and female teachers conceive of their pupils as learners of writing, these teaching conceptions and practices should also be studied. Thus, gender perspective and the different forms – narrative and paradigmatic – of thinking about learning to write could be included in the syllabus, and more generally, in the daily activity of classroom learning and teaching.

## Acknowledgements

We would like to thank the schools that participated in this study and a group of collaborators for assistance in data collection and transcription. This research was supported by Universidad Nacional del Comahue (B-139), CONICET (PIP 112 200801 01029) and ANPCyT (06-1607) in Argentina, and by Ministerio de Ciencia y Tecnología in Spain (EDU2010-21995-C02-01).

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**Appendix A. Girls' and boys' modal responses for sets of questions about: process of learning to write, social help provided to support learning, and personal and family practice of writing**

Most typical response from boys and of girls to each set of questions, as well as selected fragments from other typical responses. Figures and letters inserted in responses indicate the content categories and form categories applied. Passages coded for content are between square brackets, with the category indicated with a figure (according to codes in Appendix B, Table B.1) at the beginning and at the end of the passage. Passages coded for form are between round brackets, with the category being indicated with a lower-case letter (according to Table B.2), at the beginning and the end of the passage. Short dashes are used to distinguish codes from responses.

**Box A.1. Process of learning to write**

**Boys**

Complete first modal response: Juan. Eleven years and 3 months; fifth grade. ( $\chi^2=0.86$ ) (*How do you learn to write?...*) [11-Perseverance. (a-First and foremost,a-) perseverance, (i-because at the first, second, or third (attempt), it won't come out...-i) Uh... willingness! (i-Because without willingness, there's no work, you can't do anything.-i)-11] Uh... and more than anything, (a-the main thing would be those first two-a). And well, (a-and then-a), [10-to listen well, to pay attention. Not getting distracted (i-because (h-you can't-h) be chatting in the middle [4-of a class, when they're explaining something about verbs,-4] because in a [5-test-5] if [8-you don't know it,-8] you're done for.-i) (a-That's the main thing:-a) paying attention-10], [11-perseverance. (f-With perseverance comes patience-f)-11], [10-attention-10] (a-and that would be the most important, to learn to write.-a) And then (e-when I was little (i-as I [8-didn't know how to write-8], it was harder.-i). That is, [10-one didn't pay so much attention to what capital letters were... colouring them... accents, but rather to how letters were made. That's what changes. (i-Because when you're little, what is more important for you is... let's see... the capital c, making it like this... Now when you're in sixth grade it's more about accents, writing quickly, uh... not so much about capitals, because [8-how come you don't know-8] that Limay River (h-takes a capital-h), something one learns in fourth grade or before.-i)-e). Uh. (f-That's the difference.-f)-10] [11-And...staying hours and hours-11] at home, with my mother, uh... (j''-this must be (a-what helped me most-a)-j''). [13-When [9-you have a doubt, (h-you have to ask-h). Most children, when they had a doubt-9], didn't ask. (a-That's the most important, (h-one has to ask,-h) because otherwise...-13] [12-Practising [3-with my mother at home, who made me write, helped me a lot.-3] [5-Uh... and teachers. (i-Because if you don't have a teacher who encourages, who encourages you, or keeps you within the limits... if they don't keep you within the limits, you have no habits, [11-you don't feel like fulfilling your tasks.-11] You say: "no, if she doesn't care, why would I do

the homework?"-i) (f-The kind of teacher-f) has an influence too.-5]

(*Is there anything you find specially hard when you're learning to write? What do you do then?*) Accents. And... (i-because, (f-it's not because there's anything difficult about them-f), it's because when you're writing very quickly, (f-rather uncommon words-f), (g-as *había* (there was), *papá* (father)-g) [8-that you already know they take an accent.-8] But (g-for example you're writing a word-g)... and (f-an accent, it's something like a small stroke-f) that you can always forget. (j''-But it must be that.-j'') Because at times with rather rare words... I can't manage.-i) (g-Like César (a class-mate), [10-even if you call him,-10] he doesn't miss an accent, for example.-g) He writes quickly, nice handwriting, he never misses an accent. Yes, that's a difficulty for me. And... the verbs. No, not the verbs, the accents, [12-though it's practice more than learning-12]. And perhaps something about nouns. (i-It's because of subject and predicate. When you're about to figure out the subject and you figure out the predicate...-i) [16-When the verbs are rather difficult, you may not figure them out. [6-But I like to do that.-6] But more than that, I don't find it difficult.-16] (f-They are two different things. Learning is something [8-you don't know. But [12-practice is something you know [15-but you don't remember-15]. You will have some information, you read it, like giving an oral presentation. Instead if you know it, but you practice it... one thing is to read it for the first time and another is to practice it when you already know it.-8] One thing is to read it once, to say it, but (h-one has to practise, practise-h), (i-because if you don't [15-you're going to forget it.-15]-i)-12] That's the difference.-f) And sometimes, I get stuck with the stories. (j''-It must be that.-j'') There I stop, I take the sheet and [14-I start thinking. (g-For example: "now the prince is here... what shall I do? How do I tell him that he found the sword and kills the dragon? Or did he find an axe?"-g) You start thinking like that, until... ping! The light switches on-14] and you start to write.

(*How do you realize that you're learning to write better and better?*) And [15-when you realize that they ask you something and uh, ah? (g-for example, when they ask you something about verbs. For example, something that (e-we have being seeing lately.-e) What the root and the desinence are, for example. And now I can say straight-way (f-the root is-f) the *qu*, the *u*... and, well, *querer* (to love) or *quieren* (they love).-g) And the other thing is the desinence, that you realize, tense and number-15]

Fragments of the second modal response: Pedro. Seven years and 3 months; second grade. ( $\chi^2=0.86$ ). [5-If I don't do the homework in the evening... they scold me, my grandmother (i-because (h-I have to arrive and do the homework-h)-i), handwritten.-5].

Fragments of the fourth modal response: Luca. Ten years and 9 months; fifth grade. ( $\chi^2=0.91$ ). [14-I start thinking: "it has four letters, it can be...uh...what can it be?, what can it be?" (...) you write, (g-for example, *hola* (hello)-g) and [12-I write

it five times.-12] All apart, of course. And then I put a comma... no! I put dialogues. With small strokes. (...) [13-I ask the teacher, (g-for example, (h-does it take c or s?-h).-g) I look it up in the dictionary if it comes with c or with s.-13] [12-If I see it came out wrong I rub it out and do it again.-12].

### Girls

Complete first modal response: Ana. Ten years and 9 months; fifth grade. ( $\chi^2=0.80$ ). (*How do you learn to write?...*) Yes, anyway my mother taught me to make (b-those pretty little cards, anyway she taught me to make stuffed dolls, a lot of things she taught me, little chains, those that show up downtown. A lot of things, like little earrings.-b) [2-Anyway she knows how to make them.-2] A teacher, when she speaks to you, (j-it seems to me-j) (h-you have to [10-pay attention-10]-h) (i'-Because [1-one day in the future you're going to be grown up and you're going to have children and you'll teach your children.-i')-1]. (e'-I learned little by little, [12-I began to practice-12] then my private teacher taught me and she began to teach me everything, and also from books. With books, she had a little book [6-I liked a lot-6] it was about... about... about... (j-oh, I don't remember.-j) She said a word and I said another one (i'-because when I was very little I talked, I said things, I said one thing and as [8-I didn't know how to read-8] I said another thing, I couldn't make it-i') and then when I began to read my mother [4-taught me and she asked me what it said there and I began to spell the letters and then I put them all together and I learnt that way.-4]-e') To learn to write? (e'-What I first learnt was the abc and then I began [10-to see block letters and I began to see capital letters-10] and then from a to z I began to join letters. I wrote the letters and then [13-I asked my aunt what it said-13] and [5-she told me and then she asked me what it said and I had to start spelling the letters and putting them together-5] and I learnt that way.

(*Is there anything you find specially hard when you're learning to write? What do you do then?*) Yes, I learnt not very easily (i'-because it's difficult to go to school (e-when you're little and you're just beginning first grade and I got the sums a little wrong.-e) - i'). Writing, difficult words like this, or regular words, I find them hard at times. Yes. [13-I go and ask my aunt-13] and [12-I put it down in my copybook-12] and then when [5-the teacher asks us any word [15-we tell him-15]-5] just as the tables, the tables [8-I didn't know them-8] and I started from one to thirteen I began, no, from one to five, then from five to eight, but now numbers are hard for me anyway. That (e'-sometimes [9-I get mixed up-9] with letters (i'-because sometimes when I write *lluvia* (rain) I put the y of *yuyo* (weed) and (h-*lluvia* takes y of... ll, yes.-h) Because you, (j'-let's say-j'), we, when we began to read or to write, there are letters that (j'-let's say-j') are the same, identical, they sound the same, and you have an exercise, you write it down, (j'-let's say,-j') as I have just written, (h-*colegio* (school) takes g-h) and I wrote it with j.-i')-e')

(*How do you realize that you're learning to write better and better?*) Because I,

let's say, I am learning [13-more because of books, of dictionaries too (i'-because (f-dictionaries have almost all the words-f) and (e'-and I have a dictionary that is like... and then if I am writing and I can't write some word I look in the dictionary, because the dictionary, I'm almost always bringing it to school, but sometimes I forget it.-i') I look in the dictionary or I ask my mother (e-what letter it takes.-e) Because anyway my mother is going to help me at home,-13] (g-for example yesterday she helped to make the human skeleton.-g)-e') [4-[2-Anyway my grandma knows a little-2] and she helps me.-4]

Fragments of the second modal response: Luisa Twelve years and 2 months; sixth grade. ( $\chi^2=0.83$ ). (j-I don't remember well.-j) (e'-I started to make drawings. And through drawings, sometimes, [4-my mother told me, look, here a letter came out that is, (g-for example, b.-g)-4] [18-So I said: "what is writing"? So I tried to experience what writing was for me.-18]-e') (...) (e'-[7-I get angry-7] [13-and I tell my father how is this written? Like this, Luisa. And like this, I tell them, father, this, mother, this. Or I ask the teacher, look, I had some mistakes (*errores*).-13] [5-No, you have spelling horrors (*horrores*, a joke about *errores*)-e')-5]

#### Box A.2. Social help provided to support learning

##### Boys

Complete first modal response: Joaquín. Six years and 10 months; second grade. ( $\chi^2=0.78$ ). (*Here the boy is writing at home ...*) [4-The mother telling him the letters.-4] [3-(h-That it's not that way, that the mother tells him, because it's him who has to say, he has to do it all by himself, so she has to say that it's not that way, her helping him, telling him the letters he has to write there, on that page of his. Not so much, (i-because then [8-he doesn't know-8]-i) (c-so when the boy writes something wrong the mother takes a sheet, writes and writes and makes a drawing and then he has to read it and it's a story, and then he has to do it but not to copy it.-3] (i-If he does it wrong he has to erase it all and do it again so as [8-to know more.-8]-i) [3-Telling him to write down things-3] or if not, [5-if he writes something wrong, to erase it and to write, to write what must be written,-5]and to make the answer, and to write the little number or if he's writing a story, to go and write the letter that must be there, the one that goes with the story.-3]-c)-h)

(*Here the boy is writing at school ...*)The teacher [5-(h-has to tell him to go and write it well, and that she will help him again, it's necessary to rub-h) that letter out, or if not, to do what he can... [8-He doesn't know the r-8]. So the teacher should tell him, but (h-that is no good-h) (i-because if not he won't learn, no...-i)-5]

(*And so, do mother and teacher help the same way?*) [3-They give him a small task, so the mother tells him (helps him), but at school he has to do another one, (i-because the teacher tells him, that's why it's different. They tell him different things because the mother is perhaps helping him with a story, perhaps, and the teacher with the date. (h-That he must do it by himself ...no, that's it, just that.-i)-h)-3]

Fragments of the second modal response: Miguel. Thirteen years and 4 months; seventh grade. ( $\chi^2=0.81$ ). [5-Correcting (a-above all,-a) strokes or ideas in any case (i-because there's always some idea that will fail in your form of written expression.-i) (a-Above all-a) looking at how he works (i-because if she's not looking at what he's doing and (she) says "no, no, no, it's wrong", it makes no sense.-i) And she corrects him.-5] (e'-And when I was little [4-my mother held my hand and taught me, (h-"it's like this",-h) she told me and she showed me.-e')-4] (j-I think that-j) (a-these are the methods most used .-a)

Fragments of third modal response: Pablo. Seven years and 5 months; second grade. ( $\chi^2=0.82$ ) [4-he writes on the blackboard for him to copy, (f-because, what are blackboards good for? They are good [8-for a boy to know-8] what he (h-has got to write-f), (i-if not the teacher has to keep dictating and then [15-the boy doesn't remember-15] because [10-he was thinking of something else-10], then she has to dictate it again.-h)-i) (a-The blackboard is better than dictating.-a)-4].

### Girls

Complete first modal response: María. Ten years and 4 months; fifth grade. ( $\chi^2=0.74$ ). (*Here the girl is writing at home ...*) Perhaps [9-the girl doubts, doubts about something-9] and (c-[13-she asks the mother.-13] [4-And the mother teaches her to write the word, to read it. And she helps her better. She's repeating, repeating for her and she helps her. It might be to repeat, repeat and repeat.-4] [12-And writing it many times. Well, there she begins to make it better.-12]-c) And... how do you write for example, (j-the doubt I had about... (i'-because perhaps (the teacher) explains it better to her than the mother.-j) Because the mother can explain it to her, but maybe [2-she doesn't know it so well.-2] Or she has... perhaps the mother doesn't have a blackboard to write it on for her and the teacher does. She can help her better if she writes it on the blackboard so she can copy it.-i')-4]

(*Here the girl is writing at school ...*) And... (j-I don't know.-j) words... hum... letters. (i-Perhaps if she's in first grade [8-she doesn't know-8] the abc so well.-i) (c-[13-And perhaps she can tell her: "what is this letter?"-13] and she begins it... (e'-as [3-they made us write the a lots of times in the little notebook-3]. Perhaps [13-she asks her: "how do you make this letter?"-13] [4-And (the teacher) copies it for her in the copybook and she (the girl) begins to make it.-4] Like they did to us, something little like that. But not the same.-e')-c)

(*And so, do mother and teacher help the same way?*) (j-It seems to me-j) (i'-the teacher has more material and those things. And perhaps [2-the mother is doing something and she doesn't pay her much attention. And [4-she tells her: "you pronounce it like this",-4] and then the girl [8-won't know to pronounce it well.-8] Instead the teacher takes her time.-2]-i')

Fragments of sixth modal response: Inés. Twelve years and 1 month; sixth grade. ( $\chi^2=0.84$ ). She's [4- helping her to interpret some word or, (b-it depends (i-

because it can be a word you can use in a lot of places-i) and she tells her (h-how it must be used-h). To interpret it. To learn to write it, too. In that case, she can show it to her, if [8-she doesn't understand how it is used.-8] it's good she has a lot of places to show her how it is used.-4]. Sometimes-b) [2-teachers, (i'-as they study, they can also know more-2] than parents. But sometimes, if the girl [6-doesn't like the teacher very much, (d-that depends on the girl.-d) If she doesn't like the teacher,-6] for sure she [7-likes it better for her mother -7] to teach her to write.-i')

**Box A.3. Personal and family practice of writing**

**Boys**

Complete first modal response: Marcos. Eight years and 15 days; third grade. ( $\chi^2=0.87$ ). (*Does anybody write at home?...*) [19-(j'-only-j') sometimes when I do my homework-19]. My father (j'-only sometimes,-j') [20-when he answers the phone, numbers or things in his work, only sometimes, perhaps... (j-I don't know,-j) at home he does, (f-well, he doesn't write, he draws things-f) and (i-to [25-remember numbers, to know measurements, and yes, maybe to remember measurements-25]-i) (g-say-g) when he's going to make a house, (i-because my father makes railings-i)-20]

(*And how did you begin to write?...*) [19-Yes, when I do the homework and (j'-just that-j')-19] and also some (f-other things it can also be numbers-f).

Fragment of second modal response: Luis. Nine years and 7 months, fourth grade. ( $\chi^2=0.88$ ). (my mother) [20-When she (h-has to take things to the other hotels.-h)-20].

Fragment of fourth modal response: Iván. Five years and six months; Kindergarten. ( $\chi^2=0.91$ ) Andrea and Victoria (do) [19-the homework.-19]

**Girls**

Complete first modal response: Eva. Eleven years and 8 months; sixth grade. ( $\chi^2=0.80$ ). (*Does anybody write at home?...*) [19-For the moment my mother, is studying. And...(d-she's not much of the writing sort.-d) [3-They give her assignments,-3]-19] [24-but (j-I don't know-j) if she keeps to herself a notebook where she writes her things.-24] [20-My father works as a waiter. And he writes when (h-he has to write down notes and such things.-20)-h] [19-She, (h-if she has to do her homework, she does it.-h)-19]. My aunt Cato, (d-the one who lives at the back,-d) perhaps she writes more. (i'-She (h-has to-h) [19-do an internship because she will graduate as a forest ranger, she's studying in Misiones.-19] [24-She's got a notebook where she writes,-24] she also wrote, [21-sent us letters.-21] (j-I know that-j) [24-she has a notebook. (j-I'm sure that-j) she's also writing there. Because she spent two years alone, there. And well... (e'-I have a... because I went through a lot of stages because there was a time when my parents split. And I have a diary, but I was always [17-renewing it. And I always left some pages. (d-In one of them, I left several pages-d).-17] Now, I have another one.-e')-i')-24]

*(And how did you begin to write?...)* [7-And when I feel badly, [24,18-I get to writing everything I feel, or what happens to me, (i-so as not to tell it to anybody else-i).-18] (e'-Because I spent a whole year in crisis-7), (i'-my parents had split, that sometimes my father didn't come. But my father always took care of me. And every morning he came to fetch me to go to school. And well... one Christmas they got together again.-e') Sometimes I start to draw things (e-when [7-I'm sad-7],-i') but... I make things. I make my family and other drawings. Yes.-24]-e)

Fragments of third modal response: Lía. Nine years and 2 months; fourth grade. ( $\chi^2=0.84$ ). [21-For Children's Day my mother wrote me a letter.-21] But I almost never see my father writing. (...) (e-[21-Sometimes I write letters,-21] [23-Sometimes I write poems.-23]-e).

Fragments of fourth modal response: Mara. Ten years and 2 months; fifth grade. ( $\chi^2=0.87$ ). [20-A basketball professor is my father and he makes pamphlets. Before he made them (i-to collaborate to make more children go.-i)-20] (...) In the afternoon when I'm back home from my activities (...) [22-sometimes I play and we write. With my neighbour. (d-Either I go to her place or she comes to mine-d) and we pretend we are working and we write (...) [1-I'm her teacher-1]. And she writes. But [8-she doesn't know how to write yet-8]. She looks, like this, and she copies it.-22]

## Appendix B. Categories applied to the most typical responses according to gender

*Table B.1.* Content categories. Figures between square brackets at the end of each category indicate the code used in the analysis of modal responses (see Appendix A).

Teacher's dispositions, mental states and ways of supporting learning	Assuming teaching as an assigned social role in intergenerational transmission [1]
	Knowledge and availability [2]
	Directing the learner's actions [3]
	Collaborating with the learner through joint production, demonstrations, information [4]
	Regulating the learner's mental states (epistemic, attentional, or motivational) by means of assessments, corrections, restrictions, prohibitions [5]
Learner's dispositions, mental states, overt actions and mental processes	Likes and preferences [6]
	Moods and feelings [7]
	Knowledge and ignorance [8]
	Uncertainty, confusion [9]
	Attention [10]
	Tenacity [11]
	Practising to consolidate what has been learnt or to overcome difficulties [12]
	Searching for information [13]
	Problem solving [14]
	Retrieving, demonstrating or applying knowledge [15]
	Testing one's competence [16]
	Assessing and monitoring products and executive processes on-line [17]
	Connecting with subjective experience [18]
Uses and settings of	Educational [19]
	Professional [20]

writing	Epistolary [21]
	Play [22]
	Literary [23]
	Intimate [24]
	Epistemic [25]

**Table B.2.** Form categories. Lower-case letters between round brackets at the end of each category report the code used in the analysis of modal responses (see Appendix A).

- Hierarchical order according to an objective scheme (a)
- Series of particular cases (b)
- Series of actions (c)
- Distinction of particular cases (d)
- Recovery of personal history through:
  - General modes of doing or of thinking at given ages or moments (e)
  - Episodes, usually including reported speech (e')
- Delimitation of categories: generalization, differentiation, inclusion (f)
- Providing examples for categories (g)
- Regulation and duties; submission to rules (h)
- Justification through:
  - Expression of causes, conditions, effects and purposes (i)
  - Chains of situations and problems (i')
- Metadiscursive comments
  - Expression of personal perspective or current mental states (j)
  - Restriction of scope of what is said (j')
  - Revealing personal search for understanding (j'')